



## UAS and SmallSat Weekly News

### Contents

- 2 [NASA will fly a drone to Titan to search for life](#)
- 2 [This Brown University Grad Has Developed a Humanistic Approach to Drone Delivery](#)
- 3 [Lidar-equipped drones monitor growth Brazilian Rainforest](#)
- 4 [Terrain Editing launches as Propeller Platform's newest feature](#)
- 4 [Virginia Center for Unmanned Systems Launched Regional UAS Public Safety Workshop](#)
- 5 [Insitu to Build UAVs for US, Int'l Clients Under \\$390M Contract](#)
- 6 [Domestically developed Bayraktar drone breaks new aviation record](#)
- 6 [NOT JUST DRONE DELIVERY: DRONES HAVE ANOTHER SURPRISING JOB IN RETAIL](#)
- 7 [Alphabet's drone company Wing is on a hiring spree ahead of US expansion](#)
- 7 [Rocket Lab launches satellites for Spaceflight](#)
- 8 [An Asian Airline Will Start Testing Drones Capable of Hauling Tons of Cargo](#)
- 9 [LAANC will be available to hobbyist drone pilots on July 23rd](#)
- 9 [Unify garners more than £15m in Series B capital raise](#)
- 10 [Airobotics joins the likes of Google and Spotify as World Economic Forum's tech pioneer](#)
- 11 [AVT Imaging Sensors Integrated on Firefighting Surveillance Drone](#)
- 11 [US Army Retrofits Stinger Missiles for Counter-Drone Operations](#)
- 12 [Team Studies Drone Strikes on Airplanes by Firing Them into a Wall at 500 MPH](#)
- 13 [Drone Pilot's Family Take Evasive Action after He Spots a Shark From Above](#)
- 13 [Using drone technology to monitor Texas Tower project](#)
- 14 [Terra Drone makes oil and gas robotics investment](#)
- 14 [This Great Drone Video Will Get You Ready for Fireworks on the 4th](#)
- 15 [FAA Drone Webinar: What is LAANC?](#)
- 15 [Drone captures rare blue whale and calf off San Diego coast](#)
- 16 [Impossible Aerospace US-1 Drone Responds to California Fire](#)
- 16 [Telangana looks at becoming first 'BVLOS Compliant' state in India](#)
- 17 [Extinction Rebellion plans two-week Heathrow drone shutdown](#)
- 17 [Brazilian e-commerce company turns to drone tech for transportation](#)
- 18 [Amazon reportedly hiring 2K workers for Alexa, drone projects](#)
- 18 [ABS approves Middle East contractor's UAV service](#)
- 19 [US Air Force general: No pause in drone operations amid Iran tension](#)



## UAS and SmallSat Weekly News

29Jun19

### **NASA will fly a drone to Titan to search for life** June 28, 2019



*Titan is the only celestial body besides our planet known to have liquid rivers, lakes and seas on its surface.*

For its next mission in our solar system, [NASA](#) plans to fly a drone helicopter to Saturn's largest moon Titan in search of the building blocks of life. The Dragonfly mission, which will launch in 2026 and land in 2034, will send a rotorcraft to fly to dozens of locations across the icy moon, which has a substantial atmosphere and is viewed by scientists as an equivalent of very early-era Earth.

It is the only celestial body besides our planet known to have liquid rivers, lakes and seas on its surface, though these contain hydrocarbons like methane and ethane, not water. "This cutting-edge mission would have been unthinkable even just a few years ago, but we're now ready for Dragonfly's amazing flight."

The vehicle would have eight rotors and fly like a large drone. "During its 2.7-year baseline mission, Dragonfly will explore diverse environments from organic dunes to the floor of an impact crater where liquid water and complex organic materials key to life once existed together for possibly tens of thousands of years. Its instruments will study how far prebiotic chemistry may have progressed. They also will investigate the moon's atmospheric and surface properties and its subsurface ocean and liquid reservoirs. Instruments will search for chemical evidence of past or extant life." <https://www.aljazeera.com/news/2019/06/nasa-fly-drone-titan-search-life-190628003728716.html>

### **This Brown University Grad Has Developed a Humanistic Approach to Drone Delivery: Less Noise, More Privacy** Miriam McNabbon: June 27, 2019



Drone delivery has the potential to revolutionize the entire framework of retail sales – as well as medical and emergency services. The technology comes with some downsides, however: not all neighbors are excited about the noise that low flying drones create: and the recently revealed Amazon patent to use delivery drones for surveillance

has stoked privacy concerns.



## UAS and SmallSat Weekly News

Recent Brown University graduate Aaron Zhang has **patented** a drone delivery mechanism to take care of those issues. Using a “freefall delivery mechanism,” A2Z’s patented technology keeps drones at a 300 foot altitude throughout the entire process of pickup and delivery. A2Z recognizes the serious privacy and noise concerns linked to traditional drone deliveries and tackles these issues by stationing its drones more than 300 ft. above ground throughout the entire pickup and delivery process.

A2Z Drone Delivery currently specializes in the delivery of 5 lb. of small items from 400 ft. Its freefall delivery mechanism is patent-protected along with further developments on its ICE flight platform to allow for longer flight times and higher payload capacities, which is currently patent-pending. <https://dronelife.com/2019/06/27/this-brown-university-grad-has-developed-a-humanistic-approach-to-drone-delivery-less-noise-more-privacy/>

### **Lidar-equipped drones monitor growth Brazilian Rainforest** [Haye Kesteloo](#) Jun. 25th 2019



Measuring the growth of a Brazilian Rainforest can be a big challenge. An international team of researchers uses lidar-equipped drones as low-cost data collectors to monitor the forest restoration. The researchers have developed a drone that is equipped with three-dimensional laser scanning and hyperspectral imaging systems and that is capable of producing high-resolution maps and collecting hundreds of images at different wavelengths for any given area. With the drones, larger areas of the forest can be observed more efficiently than was previously done with researchers on the ground. The unmanned aircraft also have an advantage over lidar-equipped airplanes, which are more expensive to run and more complicated to organize.

The team includes scientists from the University of Connecticut and Florida, and NASA. With lidar-equipped drones, they collect and process two of the main variables used to evaluate the forest structure: the forest biomass and the height of the forest canopy. The drone calculates the distance by sending a pulsed laser light to the canopy forest and measuring the reflected pulses with a sensor.

It is essential for tropical forest development to observe increases in canopy height and biomass as they are indicators of a reduction in alien plant species that can be harmful to the environment. According to the researchers, such data is critical to plan new forest restoration programs and to evaluate the success of current projects. [https://dronedj.com/2019/06/25/lidar-equipped-drones-monitor-growth-brazilian-rainforest/?mkt\\_tok=eyJpIjoiTVdGbU4yVTJaRE5oWVRBMSIsInQiOiI5bjJvcXZtYWJpelwvUxSb2F6dTImdW9RSDAyZ](https://dronedj.com/2019/06/25/lidar-equipped-drones-monitor-growth-brazilian-rainforest/?mkt_tok=eyJpIjoiTVdGbU4yVTJaRE5oWVRBMSIsInQiOiI5bjJvcXZtYWJpelwvUxSb2F6dTImdW9RSDAyZ)



## UAS and SmallSat Weekly News

[0tVUUJlaVFKS1wvK1Q3K3B3cHpiB3ZxdIRVazFCNGtcl29xcCswd3BkbVYrUIZkOEdsQUZKTVNhOWJXcjhcL3NVeW9LY1lwbjkySGRUamJOM3ZQMStSunNmVmZiM241NnBuVmFQTW8ifQ%3D%3D](https://www.axcelinnovation.com/news/terrain-editing-launches-as-propeller-platforms-newest-feature)

### **Terrain Editing launches as Propeller Platform's newest feature** APPLICATION BUSINESS INTERNATIONAL MINING AND AGGREGATES NEWS ALEX DOUGLAS JUNE 27, 2019



The new capability has been designed to enable surveyors to edit out obstructions or inaccuracies on their site models like a fleet of vehicles, stockpiles, or bridges, ensuring accurate earthwork volume calculations.

As part of the announcement, Propeller said it hopes the platform can be used to help clean up the inefficiency in site data which is reportedly costing US businesses **\$177bn** per year. By using Terrain Editing in the Propeller Platform, worksites can reduce the data-cleaning process and avoid inflated volume measurements.

Rory San Miguel, CEO of Propeller, commented: "Propeller's focus is to arm our customers with the tools to increase accuracy and help them do their jobs more efficiently. While our automated terrain filtering feature removes a majority of unwanted objects from a survey, manual terrain editing is now an option for users who wish to take their surveys a step further. This new feature gives surveyors more control over their site data, making sure they can measure surface areas and volumes more accurately."

[https://www.commercialdroneprofessional.com/terrain-editing-launches-as-propeller-platforms-newest-feature%ef%bb%bf/?utm\\_source=Email+Campaign&utm\\_medium=email&utm\\_campaign=45819-305868-Commercial+Drone+Professional+DNA+-+2019-06-27](https://www.commercialdroneprofessional.com/terrain-editing-launches-as-propeller-platforms-newest-feature%ef%bb%bf/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-305868-Commercial+Drone+Professional+DNA+-+2019-06-27)

### **Virginia Center for Unmanned Systems at CIT Launched Regional UAS Public Safety Workshop** June 27, 2019 Events



The Center for Innovative Technology today announced the first in a series of regional UAS Public Safety-focused workshops presented by The Virginia Center for Unmanned Systems and the Office of the Secretary of Public Safety and Homeland Security.

Secretary of Public Safety and Homeland Security, Brian Moran kicked off the day at the Virginia Public Safety Training Center in Hanover, VA., with introductions and presented an overview of the state of UAS in the Commonwealth. The workshop goals are to educate localities on the rules and regulations surrounding UAS technology deployment, outline how to navigate various



## UAS and SmallSat Weekly News

FAA authorizations, legal considerations, and resources needed to establish drone programs in local police, fire departments or other organizations with interests in public safety. The agenda also includes case studies on drone use for risk assessment, search and rescue, accident reconstruction as well as disaster response. Flight demonstrations and discussions on the capabilities of various aircraft, as well as ground communications technologies, are also a part of the program.

“These workshops build relationships between local, state, and federal agencies to encourage public safety officials to collaborate on UAS initiatives. Bringing together communities to share ideas and support UAS expansion requires constant engagement, advocacy, and education from a broad range of players, from legislators, to drone manufacturers, to pilots, to service providers and beyond. Education is a critical and key component for expanding and deploying UAS capabilities.” – Tracy Tynan, Director, The Virginia Center for Unmanned Systems at CIT. [https://uasweekly.com/2019/06/27/virginia-center-for-unmanned-systems-at-cit-launched-regional-uas-public-safety-workshop/?utm\\_source=newsletter&utm\\_medium=email&utm\\_campaign=uasweekly\\_daily\\_newsletter\\_06\\_28\\_2019&utm\\_term=2019-06-28](https://uasweekly.com/2019/06/27/virginia-center-for-unmanned-systems-at-cit-launched-regional-uas-public-safety-workshop/?utm_source=newsletter&utm_medium=email&utm_campaign=uasweekly_daily_newsletter_06_28_2019&utm_term=2019-06-28)

**1Jul19**

**Insitu to Build UAVs for US, Int’l Clients Under \$390M Contract** Matthew Nelson July 1, 2019 Contract Awards, News



[Boeing's Insitu](#) subsidiary has landed a potential three-year, \$390.4M contract to manufacture 80 RQ-21A Blackjack unmanned aerial vehicles for the U.S. Navy, Marine Corps and three foreign military sales clients. Insitu will also supply 93 ScanEagle UAVs and provide operations support, install hardware and implement engineering change proposals as part of the firm-fixed-price, indefinite-delivery/indefinite-quantity contract, the Department of Defense [said Friday](#). The Pentagon expects contract work to be complete by June 2022.

[Blackjack](#) is designed to carry electro-optic/infrared payloads and operate for up to 16 hours, while [ScanEagle](#) is built to reach an altitude of 19.5K feet and deploy through a catapult launcher. <https://www.govconwire.com/2019/07/insitu-to-build-uavs-for-us-intl-clients-under-390m-contract/>



## UAS and SmallSat Weekly News

### Domestically developed Bayraktar drone breaks new aviation record DAILY SABAH ISTANBUL 24.06.2019



Turkey's Bayraktar TB2 boasts a service ceiling of 27,030 feet and a flight endurance of 24 hours. It recorded a flight time of over **100,000 hours**, a first in Turkish aviation history and a rare feat in the world.

The armed unmanned aerial vehicle has become the **first** domestically developed aerial vehicle to log such an extensive flight time. With its advanced electronics, software, aerodynamic, design, submain systems, as well as flight automation and performance, it stands out as one of the most advanced UAV systems in its class.

Performing active reconnaissance, surveillance and intelligence flights, it has the ability to transmit images to operation centers without delay and engage targets. It boasts a service ceiling of 27,030 feet and a flight endurance of 24 hours. It can carry 330 pounds of payload and can be operated day and night. <https://www.dailysabah.com/defense/2019/06/24/domestically-developed-bayraktar-drone-breaks-new-aviation-record>

### NOT JUST DRONE DELIVERY: DRONES HAVE ANOTHER SURPRISING JOB IN THE RETAIL SECTOR June 27, 2019 Sally French 1 News



Drones in warehouses can carry payloads (particularly useful at heights), reach narrow storage areas, localize hard-to-find items, send real-time data to improve warehouse operations and make humans' work easier.

Enterprise drone automation company FlytBase [put together a white paper \(PDF link\)](#) outlining how drones could work in warehouses ([FlytBase builds drone fleet software](#), so they have some skin in the game here).

Their research found that replacing traditional warehouse operations with a drone could save massive amounts of time, space and money. Here are some of FlytBase's estimates for how and where drones can save on warehouse efficiency:

- **Inventory audits using drones:** save more than 50% of worker time



Robert Rea | Axcel Innovation | Charlottesville and Portsmouth, VA  
[robert.rea@axcel.us](mailto:robert.rea@axcel.us) | 757-309-5869 | [www.axcelinnovation.com](http://www.axcelinnovation.com)



## UAS and SmallSat Weekly News

- **E-commerce click to ship times:** can be reduced by up to 75%
- **Inventory per square-foot:** increase by as much as 50% since drones can navigate in tighter spaces
- <http://thedronegirl.com/2019/06/27/drones-in-warehouses/>

### Alphabet's drone company Wing is on a hiring spree ahead of US expansion JUN

28, 2019 Jennifer Elias@JENN\_ELIAS



Wing spun out of Alphabet's experimental research division X last year. The Google sister-company, which has fewer than 200 employees, is seeking people who will help it scale in new regions, shape air delivery regulation and garner new business partnerships, according to at least **two dozen positions** it posted this month. Wing aims to use its drone service to deliver items such as food, coffee and medicine within minutes.

In April, it **became the first** drone firm to receive Federal Aviation Administration approval, which granted the company the ability to deliver small packages in a couple of Virginia cities. The company has said it plans to expand delivery in other parts of Virginia and around the nation.

Competitors have quickly gained traction in the race to the air-based delivery market. **Amazon received** FAA approval for Prime delivery less than two months after Alphabet, and the company unveiled a new drone that executives said could be used "within months." **Uber**, UPS and others are also hoping to secure federal approval.

<https://www.cnbc.com/2019/06/28/alphabets-drone-company-wing-is-on-a-hiring-spreed-ahead-of-expansion.html>

### Rocket Lab launches satellites for Spaceflight Jeff Foust June 29, 2019



*A view of the Mahia Peninsula in New Zealand, the launch site for Rocket Lab's Electron rocket, seen by an Electron as it ascended into space on a June 29 launch of seven smallsats*

WASHINGTON — A Rocket Lab Electron rocket launched an



## UAS and SmallSat Weekly News

Earth imaging satellite and several smaller satellites June 29. The Electron lifted off from Rocket Lab's Launch Complex 1 on New Zealand's Mahia Peninsula at 12:30 a.m. Eastern, with the rocket's upper stage deploying the satellites into low Earth orbit 53 minutes later. Rocket Lab carried out the launch for Spaceflight, the Seattle-based company that offers rideshare services on a variety of vehicles. The launch is the first of as many as five Electron missions this year for Spaceflight, carrying a mix of **small satellites**.

Six other satellites are on the rocket, bring the total payload mass to 80 kilograms. Two of the satellites are Prometheus cubesats for U.S. Special Operations Command, believed to be used for tactical communications. Two others are SpaceBEE smallsats for Swarm, a company developing a constellation of such satellites for Internet of Things services. The fifth satellite is ACRUX-1, an Australian student-built cubesat, and the sixth is for an undisclosed customer.

<https://spacenews.com/rocket-lab-launches-satellites-for-spaceflight/>

### **An Asian Airline Will Start Testing Drones Capable of Hauling Tons of Cargo** [Harry Suhartono](#) June 24, 2019



*The Beihang BKZ-005 drone*

[PT Garuda Indonesia](#) plans to use **100** unmanned aerial vehicles procured from China's Beihang UAS Technology to ship goods across the nation's more than 18,000 islands. The state-run airline will operate the drones from 30 logistic centers, each with a dedicated airstrip, within five years.

"This will totally change the landscape of the logistic industry in Indonesia," Iqbal said in an interview at the company's Jakarta headquarters. "The outlook for the cargo business in Indonesia is not just good, but very good."

Garuda will set up a venture to procure the drones. The aircraft, having a wingspan of 60 feet, a range of 750 miles and a cargo capacity of **2.2 tons**, will cost about 30% less than conventional cargo aircraft and will be assembled locally under license from Beihang. Another venture will operate the logistic centers and the airstrips. <https://www.bloomberg.com/news/articles/2019-06-24/drones-capable-of-hauling-cargo-over-oceans-tested-in-indonesia>



## UAS and SmallSat Weekly News

### LAANC will be available to hobbyist drone pilots on July 23rd [Haye Kesteloo](#) Jul. 1st 2019

**UAS** UNMANNED AIRCRAFT SYSTEMS Federal Aviation Administration

**LAANC update:**

- Available to recreational flyers starting July 23, 2019
  - Receive near-real time authorizations
- Current list of approved USSs
  - <https://faa.gov/LAANC>
- For further coordination requests, you must operate under Part 107

We knew it was coming, and now we know when. The FAA announced that [Low Altitude Authorization and Notification Capability \(LAANC\)](#) would arrive sometime later this summer. However last week, during one of the [FAA webinars](#) it was made public that LAANC would be available to hobbyist drone pilots as of **July 23rd**.

Last year, LAANC became available to [commercial drone pilots throughout the country](#), and it has made a huge difference in the time it takes to get an approval to fly in controlled airspace. A process that oftentimes took weeks, if not months, can now be completed in **near real-time**.

Recently, we reported that the FAA started requiring hobbyist or recreational drone pilots to use LAANC as well for flying their drones in controlled airspace. This created an immediate problem as there was no way for hobbyist drone pilots to access LAANC and therefore [they were not able to fly in controlled airspace at all](#) except for a limited number of select areas, such as AMA fields.

This problematic situation will soon be resolved when LAANC becomes available to hobbyist drone pilots. The announcement was made by Kevin Morris who is an Aviation Safety Inspector with the FAA and also a subject matter expert on drone operations. You can re-watch the FAA webinar [here](#). You will be able to find the list of FAA-approved UAS Service Providers [here](#). <https://dronedj.com/2019/07/01/laanc-hobbyist-drone-pilots-july-23rd/>

2Jul19

### Unify garners more than £15m in Series B capital raise APPLICATION BUSINESS EUROPE FINANCIAL INVESTMENT NEWS ALEX DOUGLAS JULY 2, 2019



transaction.

The UTM software provider managed to bring in investors including Deutsche Flugsicherung and FPIM as part of the raise. Existing investors Terra Drone, QBIC and PMV also participated in the round. Bryan, Garnier & Co., Europe’s growth investment bank, advised Unify on the



## UAS and SmallSat Weekly News

Marc Kegelaers, CEO of Unify, commented: “This funding round will enable Unify to continue building world-leading features and to expand the product offering. This now includes the BLIP which acts as an electronic license plate for drones, combined with drone tracking.”

He added: “We will continue to grow our international presence and secure additional contracts in **the global UTM ‘land grab’**. Future markets could be even larger, with the rise of air taxis, with integration between autonomous cars and drones, and with drone UTM software predicted to take over traditional aircraft as they become increasingly automated.”

[https://www.commercialdroneprofessional.com/unify-garners-more-than-15m-in-series-b-capital-raise%ef%bb%bf/?utm\\_source=Email+Campaign&utm\\_medium=email&utm\\_campaign=45819-306187-Commercial+Drone+Professional+DNA+-+2019-07-02](https://www.commercialdroneprofessional.com/unify-garners-more-than-15m-in-series-b-capital-raise%ef%bb%bf/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-306187-Commercial+Drone+Professional+DNA+-+2019-07-02)

## Airobotics joins the likes of Google and Spotify as World Economic Forum’s tech pioneer

APPLICATION BUSINESS INTERNATIONAL NEWS ALEX DOUGLAS JULY 2, 2019



Past recipients of the award include the likes of Airbnb, Google and Spotify. The committee says it based its decisions on criteria including innovation, potential impact and leadership.

Airobotics made it to the selection for its contributions in the field of automated drones and following its selection, Ran Krauss, co-founder and CEO, will be participating in the annual meeting of the New Champions. He commented: “It is an honor to be recognized as a technology pioneer by the World Economic Forum. Winning such an important award at such a critical time in autonomous robotics further validates our motivation to bring large-scale, safe, and proven automated drone solutions to urban areas.”

The Technology Pioneers were selected by a selection committee of more than **59** academics, entrepreneurs, venture capitalists and corporate executives.

[https://www.commercialdroneprofessional.com/airobotics-joins-the-likes-of-google-and-spotify-as-world-economic-forums-tech-pioneer/?utm\\_source=Email+Campaign&utm\\_medium=email&utm\\_campaign=45819-306187-Commercial+Drone+Professional+DNA+-+2019-07-02](https://www.commercialdroneprofessional.com/airobotics-joins-the-likes-of-google-and-spotify-as-world-economic-forums-tech-pioneer/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-306187-Commercial+Drone+Professional+DNA+-+2019-07-02)



## UAS and SmallSat Weekly News

### AVT Imaging Sensors Integrated on Firefighting Surveillance Drone 30 Jun 2019

Mike Rees



[Ascent Vision Technologies \(AVT\)](#) has confirmed that Bridger Aerospace has integrated their imaging sensors into Latitude's FVR-90 vertical take-off and landing fixed-wing unmanned aerial system, to create **the world's most advanced** aerial firefighting surveillance system.

The Gen V system will be used by Bridger's team of drone operators to tackle extreme fires and support wildfire management and relief missions.

The optics deliver real-time aerial data, transferring daylight and long-wave infrared imagery to the remote ground station. The footage highlights hotspots, areas affected and areas at risk of damage. The Fire Mapper includes short-wave infrared, long-wave infrared and a 13-megapixel daylight sensor. Real-time fire mapping with live locations facilitates better decision making when responding to the fire.

Latitude's VTOL provides flexibility in deployment, allowing take-off and landing from any location at any time. With an endurance of 15 hours, the system can ensure the team collects the data required for the mission. [https://www.unmannedsystemstechnology.com/2019/06/avt-imaging-sensors-integrated-on-firefighting-surveillance-drone/?utm\\_source=Unmanned+Systems+Technology+Newsletter&utm\\_campaign=5eb8353331-eBrief\\_2019\\_Jul\\_02&utm\\_medium=email&utm\\_term=0\\_6fc3c01e8d-5eb8353331-111778317](https://www.unmannedsystemstechnology.com/2019/06/avt-imaging-sensors-integrated-on-firefighting-surveillance-drone/?utm_source=Unmanned+Systems+Technology+Newsletter&utm_campaign=5eb8353331-eBrief_2019_Jul_02&utm_medium=email&utm_term=0_6fc3c01e8d-5eb8353331-111778317)

### US Army Retrofits Stinger Missiles for Counter-Drone Operations 28 Jun 2019 Mike

Rees



The [U.S. Army](#) has announced that it is retrofitting Stinger missiles, produced by Raytheon Company, with proximity fuzes to help counter the growing threat of enemy unmanned aircraft systems. The enhancement enables the lightweight, self-contained Stinger air defense system to destroy a wider array of battlefield threats by detonating its warhead near the target, while maintaining the missile's proven hit-to-kill capability.

"The Stinger enhancement gives our troops an affordable and effective way to defeat the growing number of enemy UAS targets in the skies above the battlefield," said Sam Deneke, Raytheon Land Warfare Systems vice president. "The counter-UAS mission is critical, and several allied nations are interested in this upgraded Stinger."



## UAS and SmallSat Weekly News

The Army completed qualification testing on the new proximity fuze and will begin delivering the enhanced Stinger missile to soldiers later this year.

[https://www.unmannedsystemstechnology.com/2019/06/us-army-retrofits-stinger-missiles-for-counter-drone-operations/?utm\\_source=Unmanned+Systems+Technology+Newsletter&utm\\_campaign=5eb8353331-eBrief+2019+Jul+02&utm\\_medium=email&utm\\_term=0\\_6fc3c01e8d-5eb8353331-111778317](https://www.unmannedsystemstechnology.com/2019/06/us-army-retrofits-stinger-missiles-for-counter-drone-operations/?utm_source=Unmanned+Systems+Technology+Newsletter&utm_campaign=5eb8353331-eBrief+2019+Jul+02&utm_medium=email&utm_term=0_6fc3c01e8d-5eb8353331-111778317)

### Team Studies Drone Strikes on Airplanes by Firing Them into a Wall at 500 MPH

Harry McNabb July 02, 2019



There have been a [number of opinions](#) published on the potential damage that drones pose to aircraft in the event of a collision, and those opinions have ranged from “[extreme threat](#)” to “[minimal risk](#).” Now, a German research institute has developed a bench test that they hope will settle the question.

The [Fraunhofer Institute for High Speed Dynamics](#) is trying to establish a scientific approach to assessing the danger of a drone strike: developing a unique test bench to measure the true collision impact. The institute has begun to perform initial impact tests with **drone batteries and motors**. “Using compressed air, we accelerated these two components to speeds ranging from 115 to 255 meters per second and fired them at aluminum plates up to eight millimeters in thickness that were mounted in a test bench. There was substantial deformation and indentation of the plates, and the drone battery and engine were completely destroyed.

To simulate realistic impact scenarios, researchers are now planning to construct a new type of test bench for investigating the impact of **complete drones** with a maximum weight of three kilograms and flying at speeds of up to 150 meters per second. Tests in this weight class have never been carried out before. The tests will be conducted with a variety of drones, including both amateur and semiprofessional models weighing between one and three kilograms. In addition to aircraft manufacturers, these investigations will also benefit aviation authorities, providing them with important information for a more in-depth assessment of the danger to aircraft posed by drones. <https://dronelife.com/2019/07/02/team-studies-drone-strikes-on-airplanes-by-firing-them-into-a-wall-at-500-mph/>



## UAS and SmallSat Weekly News

### Drone Pilot's Family Take Evasive Action after He Spots a Shark From Above

Malek Murison July 02, 2019

Unprovoked shark attacks are incredibly rare, but for many years [Florida](#) has topped the global charts. That trend continued last year, with 16 shark attack cases in the Sunshine State representing 50% of the U.S. total and [24% worldwide](#).

The odds currently sit at around 1 in 3,748,067. You're more likely to be killed by lightning, among many other things. But those statistics shift if you're swimming in Florida and a shark is nearby.

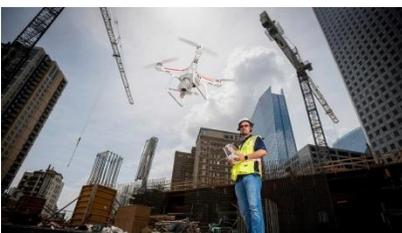


That was the situation photographer [Dan Watson](#) found himself in. He was flying his Mavic 2 Pro above his family on New Smyrna Beach when he spotted the unmistakable silhouette of a shark.

Needless to say, Watson's first move was to yell at the kids to get out of the water, as you can see in the [Instagram link](#). It was a pretty close call. Who knows how things might have unfolded had he not been flying his drone at that moment.

<https://dronelife.com/2019/07/02/florida-drone-pilot-shark-swimming-near-family/>

### Using drone technology to monitor Texas Tower project Haye Kesteloo Jul. 2nd 2019



Today, the Wall Street Journal published a piece on how 'commercial property joins the tech revolution as spending soars'. One of the aspects of the commercial property industry is the increase in the use of drones. For instance, one of the world's largest property developers, Hines, is using drone technology to monitor its Texas Tower project in downtown

Houston several times per week.

Peter Grant and Konrad Putzier write for the Wall Street Journal: "New technologies being used by Houston-based [Hines](#) include a drone surveillance service provided by an [Israeli](#) startup named [SiteAware](#). Several times a week, a drone flies over Texas Tower, a new office building rising in Houston, taking digital images that Hines compares with job specifications to confirm plans have been accurately followed."

Robert Rea | Axcel Innovation | Charlottesville and Portsmouth, VA  
[robert.rea@axcel.us](mailto:robert.rea@axcel.us) | 757-309-5869 | [www.axcelinnovation.com](http://www.axcelinnovation.com)



## UAS and SmallSat Weekly News

SiteAware offers “digital construction quality monitoring” to provide “continuous inspection reports of buildings under construction as well as completed buildings” as a turn-key service to real-estate developers, owners and construction companies.

<https://dronedj.com/2019/07/02/commercial-property-drone-technology/#more-17259>

**3Jul19**

### **Terra Drone makes oil and gas robotics investment** APPLICATION BUSINESS

INTERNATIONAL INVESTMENT NEWS ALEX DOUGLAS JULY 3, 2019



With the investment, RoNik Inspectioneering becomes a part of the Terra Drone group and gets renamed as Terra Inspectioneering. The company will focus on non-destructive testing and inspection services of industrial, hazardous, and enclosed spaces, such as storage tanks, boilers, superheaters, furnaces, stacks and pipelines.

Marien van den Hoek, CCO and co-founder of RoNik, commented: “The timing is perfect for us to have a joint venture with Terra Drone. The deployment of our technology via Terra Drone’s global network will create unprecedented market growth for all our group companies.”

Toru Tokushige, CEO at Terra Drone Corporation, added: “Oil and gas companies are fast realizing how drones can be used to improve plant operation rates, save time, and reduce costs. By incorporating RoNik’s non-destructive testing technologies and inspection services via Terra Drone’s global network of more than 25 countries, we will be able to cater to oil and gas companies in all parts of the world.” [https://www.commercialdroneprofessional.com/terra-drone-makes-oil-and-gas-robotics-investment%ef%bb%bf/?utm\\_source=Email+Campaign&utm\\_medium=email&utm\\_campaign=45819-306268-Commercial+Drone+Professional+DNA+-+2019-07-03](https://www.commercialdroneprofessional.com/terra-drone-makes-oil-and-gas-robotics-investment%ef%bb%bf/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-306268-Commercial+Drone+Professional+DNA+-+2019-07-03)

### **This Great Drone Video Will Get You Ready for Fireworks on the 4<sup>th</sup>** Harry

McNabb July 03, 2019

Summertime is a great time to experience fireworks, either on holiday like the 4th of July or after a baseball game as they do on Friday nights close to where I live. While fireworks always are better in person, we hope to get you in the mood over the next few days. From our friends at [Airvuz.com](http://Airvuz.com).

*“Fireworks may never look the same after you’ve seen them up close, thanks to drone videos like this. FPV pilot zapsha.ru flew circles around these fireworks as they blazed around his city on*



## UAS and SmallSat Weekly News

the water. We're curious to see how the drone looked after this dance with fire – we have to imagine there were a few torched pieces!" See the video at:

<https://dronelife.com/2019/07/03/getting-you-ready-for-fireworks-on-the-4th/>

### FAA Drone Webinar: What is LAANC?



Please join the Federal Aviation Administration on Thursday, July 18 at 4:00 P.M. ET for a free LIVE webinar, **[“What is the Low Altitude Authorization and Notification Capability \(LAANC\)?”](#)**

**LAANC** has revolutionized the way the FAA manages airspace authorizations and provides drone pilots with increased access to controlled airspace, as well as greater flexibility in operational planning.

This webinar will help you understand what the capability is, how it works, and how you, the drone pilot, can use it to get near-real time airspace authorizations.

We'll also discuss how the FAA, in partnership with the drone industry, enables more flights into the National Airspace System through LAANC.

Questions about the webinar? Please email [socialmedia@faa.gov](mailto:socialmedia@faa.gov).

### Drone captures rare blue whale and calf off San Diego coast Haye Kesteloo Jul. 3rd 2019



A drone has captured the gorgeous sight of a rare blue whale and her calf swimming off the coast of San Diego, California.

Drones have also been used to [study whales](#) and [collect whale snot](#). With the rising popularity of drones, we have seen more amazing video footage and photos of wildlife surface. If you use a drone to capture wildlife be sure to keep your distance as to not to disturb the animals.

In general, wildlife researchers do not recommend that all drones should be banned around wildlife, but some best practices need to be established so that the animals are not needlessly disturbed. “I think it’s a double-edged sword,” says Sophie Gilbert, a wildlife ecologist at the University of Idaho. “On the one hand, when drones are operated correctly, there’s a chance to



## UAS and SmallSat Weekly News

help people feel more connected with wildlife, which she says is extremely important for conservation outcomes.” <https://dronedj.com/2019/07/03/drone-captures-rare-blue-whale/>

### **Impossible Aerospace US-1 Drone Responds to California Fire** July 2, 2019 News



The US-1 unmanned aircraft from startup Impossible Aerospace made another public demonstration on Friday June 28<sup>th</sup>, this time at a four-alarm construction site fire burning only minutes away from the company’s Santa Clara headquarters. Equipped with thermal and optical sensors, the aircraft hovered on station for **one hour and six minutes** before the fire was extinguished, demonstrating its industry-leading endurance.

The US-1 delivered high definition thermal video to ground crews, allowing them to easily **identify hot spots** to share with first responders. The US-1 delivers between **78 and 90 minutes of flight time** when carrying payloads used by first responders, significantly outperforming other multirotor drones on the market. In other configurations, its flight time has exceeded **two hours**, says the company.

The US-1 outlasted three other news helicopters that also arrived on scene.

[https://uasweekly.com/2019/07/02/impossible-aerospace-us-1-drone-responds-to-california-fire/?utm\\_source=newsletter&utm\\_medium=email&utm\\_campaign=uasweekly\\_daily\\_newsletter\\_07\\_03\\_2019&utm\\_term=2019-07-03](https://uasweekly.com/2019/07/02/impossible-aerospace-us-1-drone-responds-to-california-fire/?utm_source=newsletter&utm_medium=email&utm_campaign=uasweekly_daily_newsletter_07_03_2019&utm_term=2019-07-03)

**5Jul19**

### **Telangana looks at becoming first ‘BVLOS Compliant’ state in India** APPLICATION BUSINESS INTERNATIONAL NEWS ALEX DOUGLAS JULY 5, 2019



It wants to do so as a means of accelerating the adoption of commercial drone operations in India.

The Information Technology, Electronics & Communications Department of the Government of Telangana wants to achieve the status of ‘BVLOS Compliant’ geography, becoming the first Indian state to support commercial drone deliveries. It has submitted a proposal seeking certification to the Directorate General of Civil Aviation along with private drone industry players Terra Drone India, Zipline, and Marut Drones.



## UAS and SmallSat Weekly News

The Department is also in the final stages of conceptualizing a 'Telangana Drone City', wherein an entire ecosystem will be developed only for the support of RPAS technologies.

Jayesh Ranjan, principal secretary of industries, commerce, and ITE&C, commented: "The Telangana Drone City will provide one-of-its-kind facilities to support the research, manufacturing, and operations of RPAS technology suites."

[https://www.commercialdroneprofessional.com/telangana-looks-at-becoming-first-bvlos-compliant-state-in-india-%ef%bb%bf/?utm\\_source=Email+Campaign&utm\\_medium=email&utm\\_campaign=45819-306491-Commercial+Drone+Professional+DNA+-+2019-07-05](https://www.commercialdroneprofessional.com/telangana-looks-at-becoming-first-bvlos-compliant-state-in-india-%ef%bb%bf/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-306491-Commercial+Drone+Professional+DNA+-+2019-07-05)

### **Extinction Rebellion plans two-week Heathrow drone shutdown** APPLICATION

COUNTER-DRONE NEWS UK ALEX DOUGLAS JULY 5, 2019



According to leaked documents seen exclusively by the Huffington Post, the climate activist group will organise 'day after day' of chaos across a two week period. The protest is part of a bid to stop flights, the leaked document reveals, in a wider move to **combat plans to expand the airport**.

The document stated: "There is the opportunity to transform the humble drone into a David which allows us to stop the Goliath of Heathrow and the global aviation industry from destroying us."

The plans outline how drones would be flown no higher than 6 feet and weigh less than 7kg as well as been flown away from designated flight paths to ensure 'non-violent action'. An open "hotline" to police and two months' notice would also be provided.

[https://www.commercialdroneprofessional.com/extinction-rebellion-plans-two-week-heathrow-drone-shutdown%ef%bb%bf/?utm\\_source=Email+Campaign&utm\\_medium=email&utm\\_campaign=45819-306491-Commercial+Drone+Professional+DNA+-+2019-07-05](https://www.commercialdroneprofessional.com/extinction-rebellion-plans-two-week-heathrow-drone-shutdown%ef%bb%bf/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-306491-Commercial+Drone+Professional+DNA+-+2019-07-05)

### **Brazilian e-commerce company turns to drone tech for transportation**

APPLICATION BUSINESS DRONES AT WORK INTERNATIONAL NEWS ALEX DOUGLAS JULY 5, 2019



According to a report from Reuters, it is trialling the use of drones for transporting products from its distribution centres to its stores. The move is part of a plan to increase efficiency and to help tackle the country's logistical and security issues.

Reuters detailed how, in an interview yesterday, **B2W's** CFO said: "We are working closely with the air space regulation agency, Anac, to help create these rules in Brazil. We expect to start



## UAS and SmallSat Weekly News

using drones in our distribution by January 2021.” The drone being tested using technology from Brazilian software engineering company SMX Systems.

[https://www.commercialdroneprofessional.com/brazilian-e-commerce-company-turns-to-drone-tech-for-transportation%ef%bb%bf/?utm\\_source=Email+Campaign&utm\\_medium=email&utm\\_campaign=45819-306491-Commercial+Drone+Professional+DNA+-+2019-07-05](https://www.commercialdroneprofessional.com/brazilian-e-commerce-company-turns-to-drone-tech-for-transportation%ef%bb%bf/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-306491-Commercial+Drone+Professional+DNA+-+2019-07-05)

### **Amazon reportedly hiring 2K workers for Alexa, drone projects** ABRAR AL-HEETI JULY 3, 2019



[Amazon](#) wants to [hire more than 2,000 workers](#) in the UK for its newest technology ventures, according to a Tuesday report. The jobs reportedly include software developers, engineers and data scientists.

The e-commerce giant will have around **30,000 workers** in the UK by the end of the year, including cloud and machine learning experts and delivery workers, according to Bloomberg. Amazon's development centers in London, Cambridge, Edinburgh, which are focused on tech like [Alexa](#) and [Prime Air drone delivery](#), will reportedly get 170 new workers. <https://www.cnet.com/news/amazon-reportedly-hiring-2k-workers-for-alexa-drone-projects/>

### **ABS approves Middle East contractor's UAV service** Jun 27th, 2019 Offshore staff



**ABU DHABI** – ARIES oil field services claims to be the **first** contractor in the Middle East to be approved and certified by ABS to provide unmanned aerial vehicle remote inspection techniques for offshore installations and vessels. ABS granted certification after witnessing demonstration surveys on-board ABS classed vessels.

Drones were used for **external** leg inspection of a mobile offshore drilling unit and **internal** condition assessments of tanks.

ABS' surveyors certified that the live data captured as images and videos will assist efficient decisions during the execution of classification and statutory surveys. <https://www.offshore-mag.com/business-briefs/article/14035478/abs-approves-middle-east-contractors-uav-service>



## UAS and SmallSat Weekly News

### US Air Force general: No pause in drone operations amid Iran tension Valerie Insinna June 27



WASHINGTON — Iran’s [downing of a U.S. surveillance drone](#) has not slowed the U.S. Air Force’s [flight operations in the Middle East](#), its top general said Wednesday. “We’re continuing to fly. And we continue to fly where we need to be, when we need to be there,” Air Force Chief of Staff Dave Goldfein said at an Air Force Association event.

“This is a conversation we could have in the South China Sea, this is a conversation we could have anywhere in terms of international airspace. In the global commons, we continue to protect those global commons for everyone and we continue to operate where we need to operate.”

On June 19, Iran’s Revolutionary Guard shot down a U.S. Navy Broad Area Maritime Surveillance—Demonstrator drone that conducts its high-altitude surveillance missions without weapons. Iran has maintained that the RQ-4 had been flying inside its airspace — a claim that U.S. officials have repeatedly denied. On June 20, Lt. Gen. Joseph Guastella, head of U.S. Air Forces Central Command, presented a map showing the drone’s location over international waters and told reporters that the aircraft had been operating at high altitude approximately 34 kilometers from Iran at the time it was attacked by Iranian surface-to-air missiles.

“This attack is an attempt to disrupt our ability to monitor the area following recent threats to international shipping and free flow of commerce. Iranian reports that this aircraft was shot down over Iran are categorically false,” Guastella said. “The aircraft was over the Strait of Hormuz and fell into international waters.” [https://www.defensenews.com/newsletters/unmanned-systems/2019/06/27/air-force-general-no-pause-in-us-drone-operations-amid-iran-tensions/?utm\\_source=Sailthru&utm\\_medium=email&utm\\_campaign=Air%2006.27.19&utm\\_term=Editorial%20-%20Air%20Force%20-%20Daily%20News%20Roundup](https://www.defensenews.com/newsletters/unmanned-systems/2019/06/27/air-force-general-no-pause-in-us-drone-operations-amid-iran-tensions/?utm_source=Sailthru&utm_medium=email&utm_campaign=Air%2006.27.19&utm_term=Editorial%20-%20Air%20Force%20-%20Daily%20News%20Roundup)